

Appendix A

Public Notification That a Potential Event Was Occurring (40 CFR §50.14(c)(1))

FIGURE A-1
NATIONAL WEATHER SERVICE PUBLIC ZONES

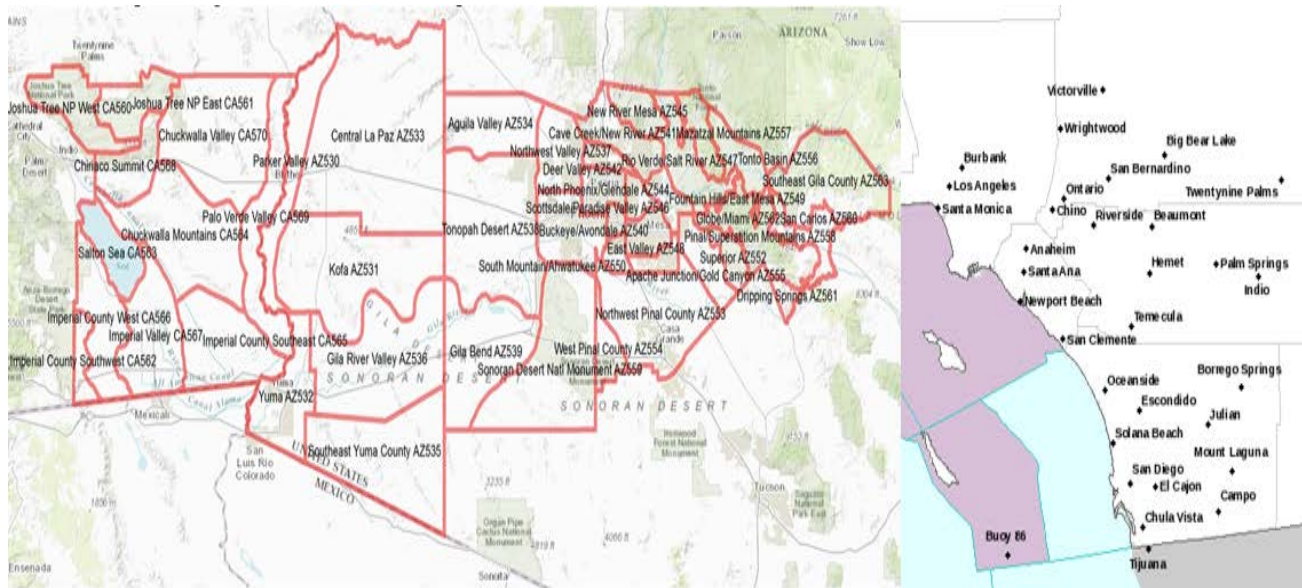


Fig A-1: Illustrates the public zones serviced by the National Weather Service Office in Phoenix and San Diego. Imperial County, including southeast sections of Riverside County are part of the reporting public zone areas from the Phoenix office

FIGURE A-2 WARM AIR MASS MOVING NORTHWARD FROM MEXICO

Area Forecast Discussion

National Weather Service Phoenix AZ

252 AM MST FRI JUL 22 2016

.SYNOPSIS...

Very hot. That describes the weather overall for today and tomorrow. Temperatures will reach excessive levels and, if proper precautions are not taken, could become deadly. Temperatures will cool a bit Sunday, but still remain fairly hot into next week, as thunderstorm chances return to the forecast. The elevated storm chances will continue through at least the following week.

.DISCUSSION...

Hot hot hot. That is what we're expecting through Saturday across the lower deserts. To start this morning, mid-level impulse near Tucson is slowly drifting northwest this morning and generating some thundershowers and plenty of high clouds. While we may see a few showers move into Maricopa/Pinal/Gila counties, they should not amount to much should they occur. The clouds are keeping temperatures quite warm; at 1 AM it was still 100 F at Sky Harbor. Expect clouds to erode later this morning and temperatures to climb into the afternoon as the high pressure system over the central CONUS moves this way. Southeast California was very hot Thursday and should see slightly warmer temperatures today. Similar readings expected Saturday, if not a degree or two warmer. Combined with the very warm overnight lows, Excessive Heat Warning currently in effect appears on target. A measure of how warm the airmass coming in is, several upper air sites stretching from New Mexico all the way to Wisconsin measured record level 500/700/850 mb temperatures with their 22.00Z soundings.

Convective activity will remain muted today and Saturday with broadscale subsidence. Despite precipitable water values in excess of 1", warming mid-level temperatures will mean little if any instability and what does develop will be tall/skinny yielding weak updrafts. As we head into Sunday, the adjustment of the upper level (250 mb) flow pattern still looks on track per EC/GFS ensemble solutions. It still appears that the mid-level anti-cyclone will take-up a position eventually over the Great Basin, which will allow deep easterly flow to stretch up the Rio Grande Valley and across southern New Mexico/Arizona/California. Meanwhile convection along the Sierra Madre Occidental will be increasing and edging northward with each passing day. This all points to boundary layer mixing ratio values climb back into the 9-10 g/kg range perhaps as early as Sunday but definitely by Monday and remain there through the week. This pattern opens the door for more instability to develop, the transversing of easterly waves, and favorable propagation vectors to promote storm movement off the mountains and into the lower deserts. GEFS Reforecast PoPs show a steady upward trend next week. Starting to see some deterministic/ensemble members depicting EPAC cyclone activity developing and skirting the Baja Peninsula, which would result in a further increase of moisture levels toward the end of next week.

Fig. A-2: An Area Forecast Discussion issued July 22 discussed an extremely warm air mass moving into the United States from Mexico. This convection promotes gusty winds from the outflow boundaries of thunderstorms. Source: Iowa State University Iowa Environmental Mesonet;

<https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDPSR&e=201607220952>.

FIGURE A-3
HEAT WARNING EXTENDED FOR IMPERIAL COUNTY – JULY 22

URGENT - WEATHER MESSAGE

NATIONAL WEATHER SERVICE PHOENIX AZ

1143 AM MST FRI JUL 22 2016

AZZ022-023-027-028-231200-

/O.CON.KPSR.EH.W.0004.00000T0000Z-160724T0700Z/

NORTHWEST MARICOPA COUNTY-GREATER PHOENIX AREASOUTHWEST MARICOPA COUNTYNORTHWEST

AND NORTH CENTRAL PINAL COUNTYINCLUDING THE CITIES OF...BUCKEYE...

LAKE PLEASANT...MORRISTOWN...

NEW RIVER...TONOPAH...WICKENBURG...CAREFREE...CAVE CREEK...

CHANDLER...FOUNTAIN HILLS...GILBERT...GLENDALE...MESA...PEORIA...

PHOENIX...SCOTTSDALE...SUN CITY...TEMPE...GILA BEND...

APACHE JUNCTION...CASA GRANDE...COOLIDGE...FLORENCE

1143 AM MST FRI JUL 22 2016

...EXCESSIVE HEAT WARNING REMAINS IN EFFECT UNTIL MIDNIGHT MST

SATURDAY NIGHT...

* AFFECTED AREA...MARICOPA AND NORTHWEST PINAL COUNTY. THIS INCLUDES THE ENTIRE PHOENIX METROPOLITAN AREA.

* TEMPERATURE...HIGHS OF 110 TO 115 WITH OVERNIGHT LOWS NEAR 90.

* IMPACTS...INCREASE IN HEAT-RELATED ILLNESSES AND ASSOCIATED HOSPITAL VISITS. SOME CASES OF HEAT RELATED ILLNESS COULD BECOME FATAL.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

NEVER LEAVE KIDS OR PETS UNATTENDED IN CARS. DRINK MORE WATER THAN USUAL AND AVOID ALCOHOL...SUGAR...AND CAFFEINE. WHEN OUTDOORS...WEAR LIGHT COLORED CLOTHING AND A WIDE-BRIMMED HAT TO KEEP YOUR HEAD AND BODY COOLER. TAKE FREQUENT REST BREAKS IN SHADED OR AIR CONDITIONED ENVIRONMENTS. PUBLIC PLACES WITH AIR CONDITIONING INCLUDE LIBRARIES...COMMUNITY CENTERS...GOVERNMENT BUILDINGS...MALLS...AND SPECIAL REFUGE STATIONS.

RECOGNIZE THE SIGNS AND SYMPTOMS OF HEAT ILLNESS. EARLY SYMPTOMS INCLUDE THINGS SUCH AS HEADACHE...THIRST...AND MUSCLE CRAMPS. SERIOUS SYMPTOMS INCLUDE WEAKNESS...SKIN THAT IS COOL TO THE TOUCH...FAST BUT WEAK PULSE...NAUSEA...AND FAINTING. SEVERE SYMPTOMS INCLUDE HOT AND RED DRY SKIN...FAST AND STRONG PULSE...SWEATING THAT HAS STOPPED...AND UNCONSCIOUSNESS. UNTREATED HEAT ILLNESS CAN LEAD TO FATAL HEAT STROKE.

STAY COOL...STAY HYDRATED...STAY INFORMED.

LOWER COLORADO RIVER VALLEY AZ-WEST CENTRAL DESERTSYUMA/MARTINEZ LAKE

AND VICINITY-SOUTHWEST DESERTSLOWER COLORADO RIVER VALLEY CA-RIVERSIDE

COUNTY/EASTERN DESERTSIMPHERIAL COUNTYINCLUDING THE CITIES OF...EHRENBERG

...PARKER...BOUSE...QUARTZSITE...SALOME...FORTUNA FOOTHILLS...SAN LUIS...SOMERTON...

YUMA...DATELAND...TACNA...WELLTON...BLYTHE...CHIRIACO SUMMIT...

DESERT CENTER...EAGLE MOUNTAIN...**BRAWLEY...CALEXICO...EL CENTRO...****GLAMIS...IMPERIAL...THE SALTON SEA**

1143 AM MST FRI JUL 22 2016 /1143 AM PDT FRI JUL 22 2016/

...**EXCESSIVE HEAT WARNING REMAINS IN EFFECT UNTIL MIDNIGHT MST**

/MIDNIGHT PDT/ SATURDAY NIGHT...

* AFFECTED AREA...IMPERIAL...EASTERN RIVERSIDE...YUMA...AND LA PAZ COUNTIES. THIS INCLUDES THE CITIES OF YUMA AND EL CENTRO.

* TEMPERATURE...HIGHS OF 112 TO 118 AND LOWS IN THE MID 80S.

* IMPACTS...INCREASE IN HEAT-RELATED ILLNESSES AND ASSOCIATED HOSPITAL VISITS. SOME CASES OF HEAT RELATED ILLNESS COULD BECOME FATAL.

Fig. A-3: An Urgent Weather Message extended an Excessive Heat Warning. Source: Iowa State University Iowa Environmental Mesonet;
<https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=NPWPSR&e=201607221843>.

FIGURE A-4
WARM AIR MASS MOVING NORTHWARD FROM MEXICO

Area Forecast Discussion

National Weather Service Phoenix AZ

250 AM MST SAT JUL 23 2016

.SYNOPSIS...

Excessively hot temperatures will last for one more day before some relief is seen starting Sunday. Though temperatures will moderate slightly, they will still remain fairly hot through next week while thunderstorm chances increase. Thunderstorm chances for next week look fairly typical for monsoon with better chances over high terrain areas and mainly just slight chances over the deserts.

.DISCUSSION...

Current moisture levels remain on the low side with PWATS around 1.25 inches while warmer than normal conditions aloft continue to keep monsoon activity somewhat dampened. These conditions will last through today with monsoon storms confined to higher terrain locations. The Excessive Heat Warning remains in effect through the rest of today, but increasing moisture and slightly lower heights aloft will bring temperatures below criteria starting Sunday.

A more favorable monsoon flow is in the process of setting up and will allow PWATS to increase to closer to 1.50 inches for Sunday. As the sub-tropical high sets up to our north or northeast through much of the coming week, moisture levels should remain high enough to promote fairly typical monsoon thunderstorm activity. Storms on Sunday will still mostly be limited to higher terrain locations, but we should see at least a few isolated storms into the deserts. As moisture spreads further west and deepens into Monday, chances for afternoon and evening thunderstorms will increase slightly while even extending into portions of southeast California. Due to the lack of any significant distinct inverted troughs and the good possibility of more extensive cloudiness from quite high mid level RHs, PoPs are mainly broad-brushed and still in the slight chance to chance category through Wednesday. Winds aloft, including steering flow for this period will be rather weak, so not anticipating much of a threat for severe thunderstorms.

Overall it seems the coming week will be a fairly typical monsoon thunderstorm week with a couple more active days and a couple less active days. It does seem models are pulling back on the moisture levels somewhat, especially for the middle of the week. Because of this, I noticeably lowered PoPs on Thursday as both the GFS and European temporarily lowers moisture levels. This drying likely won't last long as a more favorable moisture flow is indicated going into next weekend. Temperatures through the coming week should be near seasonal normals to a couple degrees warmer as there is no clear indication of any cooler days from widespread rain or cloud cover.

Fig. A-4: An Area Forecast Discussion issued July 22 discussed an extremely warm air mass moving into the United States from Mexico. This convection promotes gusty winds from the outflow boundaries of thunderstorms. Source: Iowa State University Iowa Environmental Mesonet;
<https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDPSR&e=201607230950>.

FIGURE A-5
ABRUPT MONSOONAL SURGE OUT OF MEXICO CREATES GUSTY WINDS AT YUMA

Area Forecast Discussion

National Weather Service Phoenix AZ

836 AM MST SAT JUL 23 2016

.SYNOPSIS...Excessively hot temperatures will last for one more day before some relief is seen starting Sunday. Though temperatures will moderate slightly, they will still remain fairly hot through next week while thunderstorm chances increase. Thunderstorm chances for next week look fairly typical for monsoon with better chances over high terrain areas and mainly just slight chances over the deserts.

.DISCUSSION...

A few days ago we knew this Excessive Heat Watch, then Warning for the lower deserts would be a little tricky because of an uncertain amount of remnant monsoon moisture that could retard the diurnal heating curve. And we were at the mercy of the numerical models that were consistently forecasting a drying trend. Atmospheric thickness values and a much warmer airmass aloft certainly support excessive heat, however we now realize we could never dry out enough. For example to our surprise this morning, an old and distantly traveled convective outflow boundary moved out of Old Mexico and surfaced in southern AZ between 4 am and 6 am mst. A weak boundary move through Phoenix between 530 am and 6am (locals noted the suspended dust this morning) sending surface dewpoints into the middle 50s, and between 4 am and 6 am 44 mph southerly gusts hit Yuma, with 38 mph gusts at Blythe, all contributing to more surface humidity. This is the last day of excessive heat as more moisture and lower atmospheric thickness values are expected Sunday and next week, along with more monsoon moisture to reduce afternoon temperatures.

.Previous discussion...320 AM MST...

Current moisture levels remain on the low side with PWATS around 1.25 inches while warmer than normal conditions aloft continue to keep monsoon activity somewhat dampened. These conditions will last through today with monsoon storms confined to higher terrain locations. The Excessive Heat Warning remains in effect through the rest of today, but increasing moisture and slightly lower heights aloft will bring temperatures below criteria starting Sunday.

A more favorable monsoon flow is in the process of setting up and will allow PWATS to increase to closer to 1.50 inches for Sunday. As the sub-tropical high sets up to our north or northeast through much of the coming week, moisture levels should remain high enough to promote fairly typical monsoon thunderstorm activity. Storms on Sunday will still mostly be limited to higher terrain locations, but we should see at least a few isolated storms into the deserts.

Fig. A-5: A surge of monsoonal air in the morning of July 23 created gusty winds at Yuma. These winds transported dust into Imperial County. Source: Iowa State University Iowa Environmental Mesonet;
<https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDPSR&e=201607231536201607230950>.

FIGURE A-6
SOUTHERLY WINDS FORECASTED FOR IMPERIAL COUNTY – JULY 23

CAZ033-232300-
 IMPERIAL COUNTY-
 INCLUDING THE CITIES OF...BRAWLEY...CALEXICO...EL CENTRO...GLAMIS...
 IMPERIAL...THE SALTON SEA
 1009 AM PDT SAT JUL 23 2016
 ...EXCESSIVE HEAT WARNING IN EFFECT UNTIL MIDNIGHT PDT TONIGHT...
 .TODAY...MOSTLY SUNNY AND VERY HOT. HIGHS 110 TO 115. SOUTHEAST WIND
 10 TO 20 MPH.
 .TONIGHT...MOSTLY CLEAR IN THE EVENING...THEN BECOMING PARTLY CLOUDY.
 LOWS 76 TO 86. SOUTH WIND 10 TO 20 MPH.
 .SUNDAY...PARTLY SUNNY AND HOT. HIGHS 107 TO 112. SOUTH WIND 10 TO
 15 MPH.
 .SUNDAY NIGHT...PARTLY CLOUDY. LOWS 75 TO 85. SOUTH WIND 5 TO 15 MPH.
 .MONDAY...PARTLY SUNNY AND HOT. HIGHS 105 TO 110. SOUTH WIND 5 TO
 15 MPH.
 .MONDAY NIGHT...PARTLY CLOUDY. LOWS IN THE MID 70S TO MID 80S.
 .TUESDAY...PARTLY SUNNY. A 10 PERCENT CHANCE OF AFTERNOON SHOWERS AND
 THUNDERSTORMS. HOT. HIGHS 106 TO 111.
 .TUESDAY NIGHT...PARTLY CLOUDY WITH A 10 PERCENT CHANCE OF SHOWERS
 AND THUNDERSTORMS. LOWS IN THE UPPER 70S TO UPPER 80S.
 .WEDNESDAY...PARTLY SUNNY WITH A 10 PERCENT CHANCE OF SHOWERS AND
 THUNDERSTORMS. HOT. HIGHS 106 TO 111.
 .WEDNESDAY NIGHT...PARTLY CLOUDY. A 10 PERCENT CHANCE OF SHOWERS AND
 THUNDERSTORMS IN THE EVENING. LOWS IN THE MID 70S TO MID 80S.
 .THURSDAY...PARTLY SUNNY AND HOT. HIGHS 106 TO 111.
 .THURSDAY NIGHT...PARTLY CLOUDY. LOWS IN THE MID 70S TO MID 80S.
 .FRIDAY...PARTLY SUNNY. A 10 PERCENT CHANCE OF AFTERNOON SHOWERS AND
 THUNDERSTORMS.

Fig. A-6: Winds up to 20 mph were forecasted, although actual winds were higher.
 Source: <http://www.wrh.noaa.gov/psr/redirect.php?pil=phxzfppsr&wfo=psr>.

FIGURE A-7
HEAT WARNING CANCELLED

NPWPSR
URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE PHOENIX AZ
802 PM MST SAT JUL 23 2016
AZZ020>023-025>028-CAZ031>033-240415-
/O.CAN.KPSR.EH.W.0004.000000T0000Z-160724T0700Z/
LOWER COLORADO RIVER VALLEY AZ-WEST CENTRAL DESERTS NORTHWEST MARICOPA COUNTY-GREATER PHOENIX
AREAYUMA/MARTINEZ LAKE AND VICINITY-SOUTHWEST DESERTS SOUTHWEST MARICOPA COUNTY NORTHWEST AND NORTH CENTRAL
PINAL COUNTY LOWER COLORADO RIVER VALLEY CA-RIVERSIDE COUNTY/EASTERN DESERTS IMPERIAL COUNTY INCLUDING THE
CITIES OF...EHRENBERG...PARKER...BOUSE...
QUARTZSITE...SALOME...BUCKEYE...LAKE PLEASANT...MORRISTOWN...
NEW RIVER...TONOPAH...WICKENBURG...CAREFREE...CAVE CREEK...
CHANDLER...FOUNTAIN HILLS...GILBERT...GLENDALE...MESA...PEORIA...
PHOENIX...SCOTTSDALE...SUN CITY...TEMPE...FORTUNA FOOTHILLS...
SAN LUIS...SOMERTON...YUMA...DATELAND...TACNA...WELLTON...
GILA BEND...APACHE JUNCTION...CASA GRANDE...COOLIDGE...FLORENCE...
BLYTHE...CHIRIACO SUMMIT...DESERT CENTER...EAGLE MOUNTAIN...
BRAWLEY...CALEXICO...EL CENTRO...GLAMIS...IMPERIAL...
THE SALTON SEA
802 PM MST SAT JUL 23 2016 /802 PM PDT SAT JUL 23 2016/
...EXCESSIVE HEAT WARNING IS CANCELLED...
THE NATIONAL WEATHER SERVICE IN PHOENIX HAS CANCELLED THE
EXCESSIVE HEAT WARNING.
TEMPERATURES WERE DECREASING WITH SUNSET AND ALTHOUGH WARMER THAN
AVERAGE READINGS WILL CONTINUE FOR THE NEXT SEVERAL DAYS...READINGS
WILL REMAIN BELOW EXCESSIVE LEVELS.

Fig. A-7: An intrusion of moist monsoonal air helped lower temperatures slightly. Source:
Iowa State University Iowa Environmental Mesonet;
<https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=NPWPSR&e=201607240302>.

FIGURE A-8 GUSTY WINDS AND BLOWING DUST EXTENDED

Area Forecast Discussion

National Weather Service Phoenix AZ

805 PM MST SAT JUL 23 2016

.SYNOPSIS...

Moisture and cloud cover will gradually increase over the area through the beginning of the week taking some edge off the heat, and providing better chances of showers and thunderstorms. The best opportunity for rainfall will occur over the higher terrain north and east of Phoenix with lesser chances heading west into southeast California. **Outside of thunderstorms, gusty winds and blowing dust will be possible throughout the week as well.**

.DISCUSSION...

A well defined MCV continue to churn westwards across the Baja peninsula while a subtropical anti-cyclone remains centered over central New Mexico. This synoptic configuration has placed much of east/northeast Arizona within a favorable diffluent jet region, and an embedded weak H5 shortwave has supported semi-organized convection over the White Mountains and Mogollon Rim. However, despite a shallow morning Gulf moisture surge, 00Z KPSR and KTWC sounding data indicated this layer has already been scoured away leaving sfc-750mb mixing ratios only in a 8-9 g/kg range (and even drier towards the more critical 700 mb layer). This has yielded minimal MLCAPE below 500 J/kg and a more pronounced CINH measure at lower elevations. As a result, outflow boundaries have been largely insufficient to initiate additional convective complexes; and only a few boundaries combined with synoptic scale ascent have kept storms persisting through eastern Arizona. This activity should gradually wane through the remainder of the evening as inhibition grows more substantial. Otherwise with temperatures falling this evening, have cancelled the excessive heat warning. Modest adjustments were also made to cloud cover forecasts given recent satellite trends..

.AVIATION...

Southeast California/Southwest Arizona including KIPL and KBLH:

Strong south to southeast prevailing winds will be the most likely outcome through Sunday afternoon with **lofted dust/haze impacting slantwise visibilities** tonight. After some weakening of speeds overnight, occasional **gustiness will once again be possible Sunday.** Some mid/high clouds will be possible along with dust trapped in the lower atmosphere.

Fig. A-8: A surge of monsoonal air in the morning of July 23 created gusty winds at Yuma. These winds transported dust into Imperial County. Source: Iowa State University Iowa Environmental Mesonet;
<https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDPSR&e=201607240305>.

FIGURE A-9
GULF SURGE BRINGS GUSTY WINDS AND BLOWING DUST

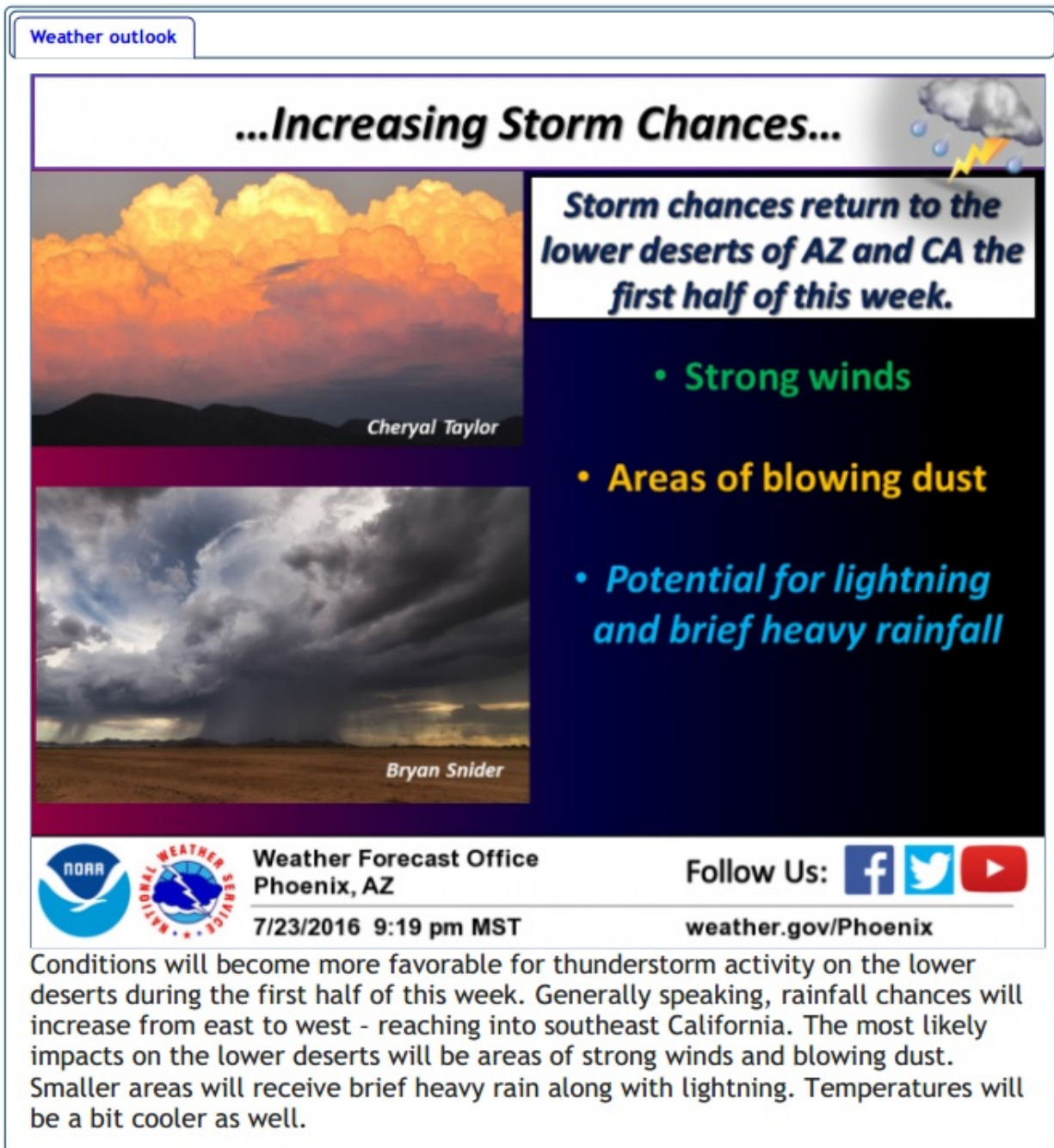


Fig. A-9: A Gulf Surge brought thunderstorms to the region and with them gusty winds from outflow boundaries. Blowing dust lofted by the strong winds was also forecasted. Source: NWS Phoenix office Weather Story.

FIGURE A-10
DUST/HAZE IMPACT VISIBILITY AT LOCAL AIRFIELDS

Area Forecast Discussion
National Weather Service Phoenix AZ
310 AM MST Sun JUL 24 2016
.AVIATION...

Southeast California/Southwest Arizona including KIPL and KBLH:
Strong south to southeast prevailing winds will be the most likely
outcome through Sunday afternoon with lofted dust/haze impacting
slantwise visibilities tonight. After some weakening of speeds
overnight, occasional gustiness will once again be possible Sunday.
Some mid/high clouds will be possible along with dust trapped in the
lower atmosphere.

Fig. A-10: An excerpt from an Area Forecast Discussion mentioned that southerly winds would loft dust that would impact visibility at local airfields. Source: Iowa State University Iowa Environmental Mesonet;
<https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDPSR&e=201607241010>.

FIGURE A-11 SURGE OF MONSOONAL AIR CREATES GUSTY WINDS

Area Forecast Discussion

National Weather Service Phoenix AZ

830 AM MST SUN JUL 24 2016

.SYNOPSIS...

An increase in moisture and cloud cover over the region is expected to take some edge off the heat, and provide somewhat better chances of showers and thunderstorms through the middle part of the upcoming workweek. The best opportunity for rainfall will occur over the higher terrain north and east of Phoenix, with lesser chances heading west into southeast California. A better chance for showers and thunderstorms is then forecast for the end of the week and into the upcoming weekend, as deeper moisture begins to move into the region from the south and southeast.

.DISCUSSION...

One thing noticeable from the regional weather balloon data was that monsoon moisture levels in southern AZ have now crept back up to those seen last week, July 17,18, and 19th, when we had isolated severe storms and flooding in south central AZ, including parts of Phoenix. Monsoon moisture has surge dramatically into southern AZ from Mexico this weekend due to a strong push of humid convective outflow boundaries. This morning was no different. A large convective complex south of the border last night generated northward moving outflows which hit the lower Colorado River Valley at Yuma with southerly gusts of 43 mph after 4 am. Gusts to 43 mph were still ongoing at 745 am. South and southeasterly wind gusts to 31 mph at Imperial CA and 30 mph at Blythe started at 8 am. As moisture and winds from southwest AZ recurve east, Phoenix may be the recipient of westerly breezes and dewpoint jumps later this morning.

The large convective MCS outbreak in northwest Mexico last night was located on the diffluent west side or leading edge of upper level inverted trof that came out of south Texas. Streamline analysis derived from satellite imagery, including satellite high density winds and satellite wind computations of divergence fields, highlight the upper level storm forcing. And, this inverted trof seen in the model guidance yesterday, is forecast by last nights models to slow and weaken before moving into southeast and portions of south central AZ later tonight through Monday afternoon.

For today. Monsoon moisture in southern AZ is not excessive nor minimal either, just pretty much at typical levels. From the weather balloon soundings thermodynamic convective trigger temperatures remain fairly high, toward late afternoon hours. Therefore in our forecast area of south central AZ we are expecting a late afternoon start to convection, despite increased boundary layer moisture, with most tstms relegated to the mountains north through southeast of Phoenix. Since moisture is at elevated levels, convective outflow boundaries coming off the mountains, or moving in from southeast AZ could spark secondary and even tertiary storms this evening. A low grade monsoon forecast is expected today and this evening, meaning a slight chance of showers and thunderstorms, with storms favoring the mountains.

Fig. A-11: A surge of monsoonal air created gusty winds in southeast California. These winds transported dust into the Imperial Valley. Source: Iowa State University Iowa Environmental Mesonet;

<https://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDPSR&e=201607241530>.

FIGURE A-12

SURGE OF MONSOONAL AIR CREATES GUSTY WINDS



Fig. A-12: A surge of monsoonal air created gusty winds as far as the Coachella Valley.

Source: NWS San Diego;

http://www.wrh.noaa.gov/total_forecast/getprod.php?prod=XXXAFDSGX&wfo=SGX.

FIGURE A-13
SOUTHERLY WINDS FORECASTED FOR IMPERIAL COUNTY – JULY 24

CAZ033-242300-
IMPERIAL COUNTY-
INCLUDING THE CITIES OF...BRAWLEY...CALEXICO...EL CENTRO...GLAMIS...
IMPERIAL...THE SALTON SEA
143 AM PDT SUN JUL 24 2016
.TODAY...MOSTLY SUNNY IN THE MORNING...THEN BECOMING PARTLY SUNNY.
HOT. HIGHS 106 TO 111. SOUTH WIND 10 TO 20 MPH.
.TONIGHT...PARTLY CLOUDY. LOWS 76 TO 86. SOUTHWEST WIND 10 TO 20 MPH.
.MONDAY...PARTLY SUNNY AND HOT. HIGHS 105 TO 110. SOUTH WIND 5 TO
15 MPH.
.MONDAY NIGHT...PARTLY CLOUDY. A SLIGHT CHANCE OF SHOWERS AND
THUNDERSTORMS IN THE EVENING. LOWS 76 TO 86. SOUTHWEST WIND 5 TO
15 MPH. CHANCE OF MEASURABLE RAIN 10 PERCENT.
.TUESDAY...PARTLY SUNNY AND HOT. HIGHS 107 TO 112. SOUTH WIND 5 TO
10 MPH.
.TUESDAY NIGHT...PARTLY CLOUDY. A 10 PERCENT CHANCE OF SHOWERS AND
THUNDERSTORMS IN THE EVENING. LOWS IN THE UPPER 70S TO UPPER 80S.
.WEDNESDAY...PARTLY SUNNY. A 10 PERCENT CHANCE OF AFTERNOON SHOWERS
AND THUNDERSTORMS. HOT. HIGHS 108 TO 113.
.WEDNESDAY NIGHT...PARTLY CLOUDY. A 10 PERCENT CHANCE OF SHOWERS AND
THUNDERSTORMS IN THE EVENING. LOWS IN THE UPPER 70S TO UPPER 80S.
.THURSDAY...MOSTLY SUNNY AND HOT. HIGHS 108 TO 113.
.THURSDAY NIGHT...MOSTLY CLEAR. LOWS IN THE MID 70S TO MID 80S.
.FRIDAY...PARTLY SUNNY. A 10 PERCENT CHANCE OF AFTERNOON SHOWERS AND
THUNDERSTORMS. HOT. HIGHS 105 TO 110.
.FRIDAY NIGHT...PARTLY CLOUDY WITH A 10 PERCENT CHANCE OF SHOWERS AND
THUNDERSTORMS. LOWS IN THE MID 70S TO MID 80S.
.SATURDAY...PARTLY SUNNY WITH A 10 PERCENT CHANCE OF SHOWERS AND
THUNDERSTORMS. HIGHS 104 TO 109.

Fig. A-13: Winds up to 20 mph were forecasted, although actual winds were higher.

Source: <http://www.wrh.noaa.gov/psr/redirect.php?pil=phxzfppsr&wfo=psr>.

FIGURE A-14
AIR QUALITY ALERT ISSUED FOR EL CENTRO – JULY 24

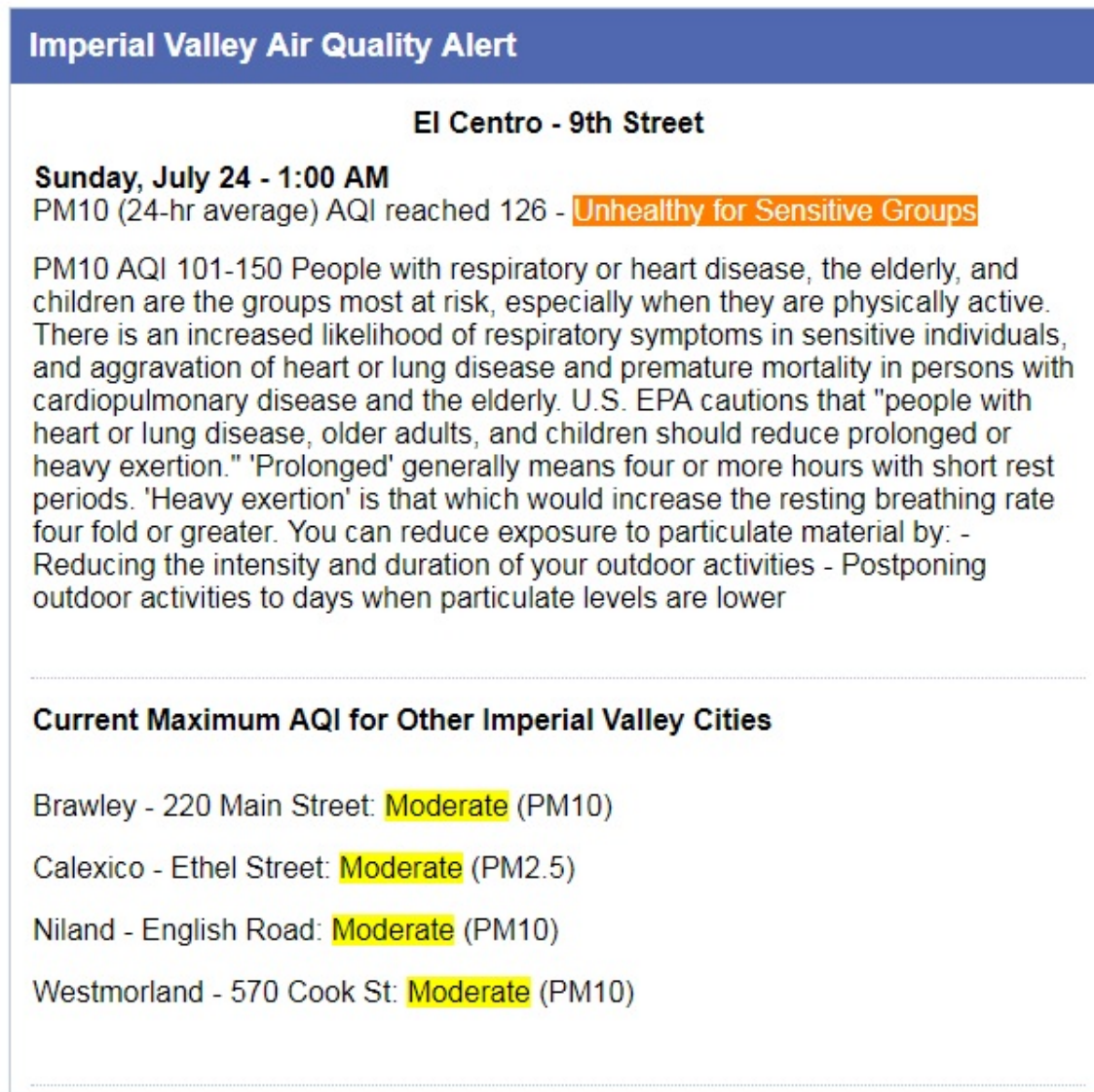


Fig. A-14: The dust lofted by gusty winds triggered an Air Quality Alert to be posted on the ICAPCD website informing the public that air quality in the El Centro area had dropped to Unhealthy for Sensitive Groups. Source: ICAPCD Archives.

FIGURE A-15
AIR QUALITY ALERT ISSUED FOR CALEXICO – JULY 24

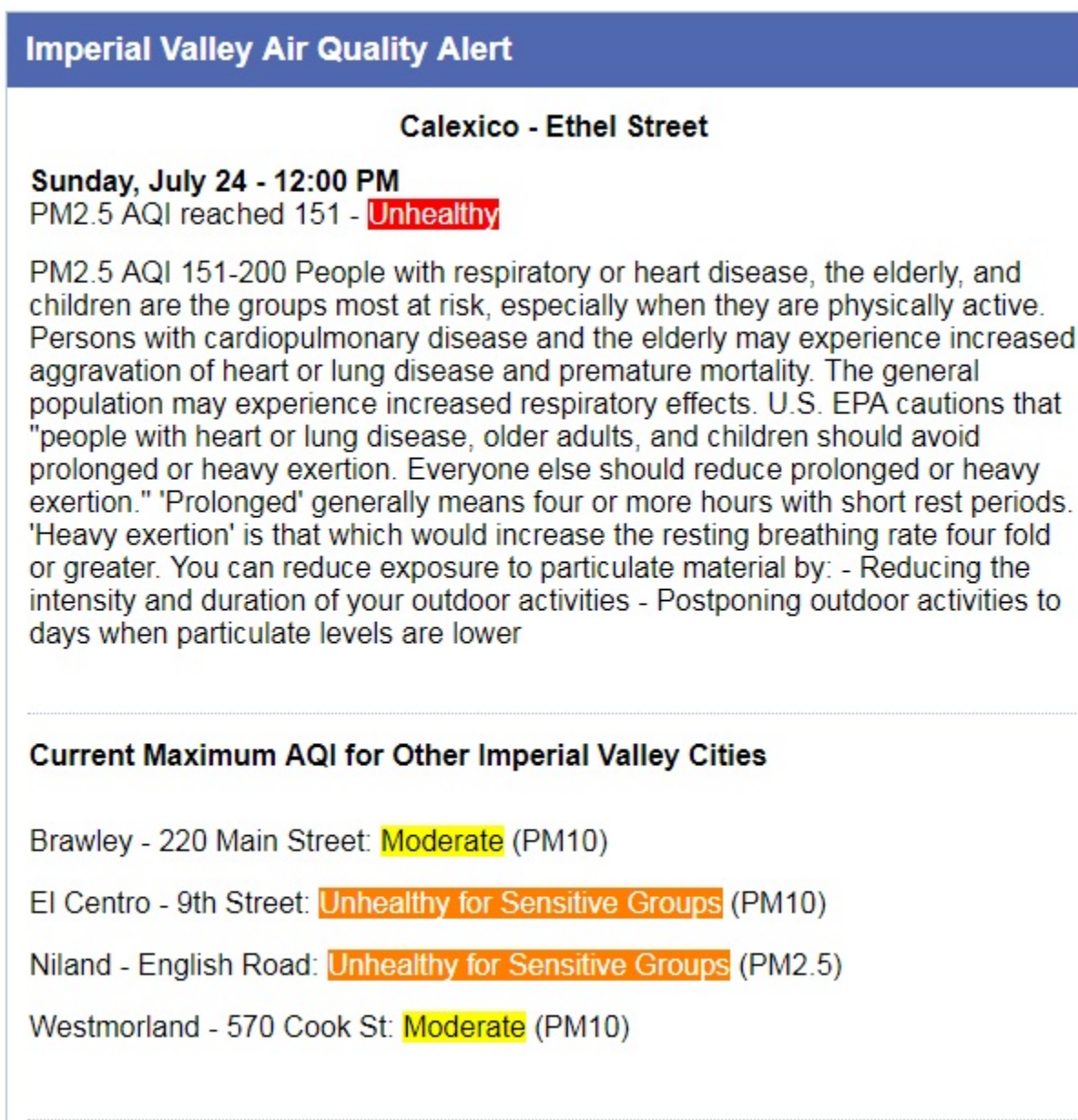


Fig. A-15: The dust lofted by gusty winds triggered an Air Quality Alert to be posted on the ICAPCD website informing the public that air quality in the Calexico area had dropped to Unhealthy. Source: ICAPCD Archives.

**FIGURE A-16
AIR QUALITY INDEX**

| Air Quality Index Levels of Health Concern | Numerical Value | Meaning |
|---|----------------------------|---|
| Good | 0 to 50 | Air quality is considered satisfactory, and air pollution poses little or no risk. |
| Moderate | 51 to 100 | Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution. |
| Unhealthy for Sensitive Groups | 101 to 150 | Members of sensitive groups may experience health effects. The general public is not likely to be affected. |
| Unhealthy | 151 to 200 | Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects. |
| Very Unhealthy | 201 to 300 | Health alert: everyone may experience more serious health effects. |
| Hazardous | 301 to 500 | Health warnings of emergency conditions. The entire population is more likely to be affected. |

Fig. A-16: The Air Quality Index The AQI is an index for reporting daily air quality. It tells you how clean or polluted your air is, and what associated health effects might be a concern for you. The AQI focuses on health effects you may experience within a few hours or days after breathing polluted air. EPA calculates the AQI for five major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution (also known as particulate matter), carbon monoxide, sulfur dioxide, and nitrogen dioxide. For each of these pollutants, EPA has established national air quality standards to protect public health. Ground-level ozone and airborne particles are the two pollutants that pose the greatest threat to human health in this country. Source: <https://airnow.gov/index.cfm?action=aqibasics.aqi>.

FIGURE A-17
IMPERIAL COUNTY ISSUED NO BURN DAY

Imperial County Air Pollution Control District
Daily Weather and Ag. Burning Information

Date: SATERDAY JULY 23 2016

Yesterday's Weather Observations at Imperial Airport (ASOS) FAA/NWS

| LOCAL TIME | TEMP °F | WINDS MILES PER HOUR | VISIBILITY MILES |
|------------|---------|----------------------|------------------|
| 7 AM | 90 | ESE 3 | 10 |
| 8 AM | 93 | ESE 8 | 10 |
| 9 AM | 100 | SSE 3 | 10 |
| 10 AM | 106 | S 5 | 10 |
| 11 AM | 109 | SE 8 | 10 |
| NOON | 111 | SSE 8 | 10 |
| 1 PM | 111 | SSE 10 | 10 |
| 2 PM | 115 | SE 14 | 10 |
| 3 PM | 117 | ESE 14 | 10 |
| 4 PM | 115 | ESE 14 | 10 |
| 5 PM | 117 | SE 13 | 10 |
| 6 PM | 115 | ESE 14 | 10 |
| 7 PM | 111 | SE 14 | 10 |

Max. Temperature yesterday was 117 degrees

Today's Mt. Signal Visibility at 7:30 AM YES NKX 12Z 500 MB Height _____
1Y7 12Z 500 MB Height _____

Forecasts
High Today 116 Local Forecast (Issued 8 AM Local) Computer Forecast (RUC 40KM 12Z)

| | | |
|---|---------------------|--------------------|
| Est. Time Mixing Height reaches 3000 feet | _____ | 11:00 |
| Forecast of Maximum Mixing Height | _____ feet | 13,000 feet |
| Forecast for Morning surface winds | <u>SE 5-15</u> mph | <u>SE 5-15</u> mph |
| Forecast for afternoon surface winds | <u>SE 5-15</u> mph | <u>SE 5-15</u> mph |
| Forecast for evening surface winds | <u>S 10-15</u> mph | |
| Forecast 10 AM - 3 PM transport winds | <u>SSE 5-10</u> mph | |

Comments/Complaints: _____

Burn Hours _____ ARB No Burn Day _____ District called No Burn Day YES

Total actually burned today _____ acres Crops burned _____

IMPERIAL COUNTY AIR POLLUTION CONTROL DISTRICT 2011 Int MC

Fig. A-17: A copy of the Imperial County Air Pollution Control District official record of the conditions as they existed for a determination of a "No Burn" day on July 23, 2016.

FIGURE A-18
IMPERIAL COUNTY ISSUED NO BURN DAY

Imperial County Air Pollution Control District
Daily Weather and Ag. Burning Information

Date: Sunday July 24 2016

Yesterday's Weather Observations at Imperial Airport (ASOS) FAA/NWS

| LOCAL TIME | TEMP °F | WINDS MILES PER HOUR | VISIBILITY MILES |
|------------|---------|----------------------|------------------|
| 7 AM | 91 | S 15 | 10 |
| 8 AM | 93 | SSE 9 | 9 |
| 9 AM | 97 | SE 14 | 5 |
| 10 AM | 97 | S 7 | 4 |
| 11 AM | 100 | WNW 3 | 5 |
| NOON | 104 | ESE 3 | 8 |
| 1 PM | 108 | ESE 10 | 10 |
| 2 PM | 111 | SE 8 | 8 |
| 3 PM | 113 | SE 13 | 10 |
| 4 PM | 117 | SE 12 | 10 |
| 5 PM | 111 | SE 21 | 6 |
| 6 PM | 108 | SE 20 | 5 |
| 7 PM | 106 | SE 17 | 7 |

Max. Temperature yesterday was 117 degrees

Today's Mt. Signal Visibility at 7:30 AM YES NKX 12Z 500 MB Height _____
1Y7 12Z 500 MB Height _____

Forecasts
High Today 112 Local Forecast (Issued 8 AM Local) Computer Forecast (RUC 40KM 12Z)

| | |
|---|---------------------------------------|
| Est. Time Mixing Height reaches 3000 feet | <u>10:00</u> |
| Forecast of Maximum Mixing Height | _____ feet <u>11,100</u> feet |
| Forecast for Morning surface winds | <u>S 10-20</u> mph <u>S 10-20</u> mph |
| Forecast for afternoon surface winds | <u>S 10-20</u> mph <u>S 10-20</u> mph |
| Forecast for evening surface winds | <u>SW 10-20</u> mph |
| Forecast 10 AM - 3 PM transport winds | <u>S 5-10</u> mph |

Comments/Complaints: _____

Burn Hours _____ ARB No Burn Day _____ District called No Burn Day YES
Total actually burned today _____ acres Crops burned _____
IMPERIAL COUNTY AIR POLLUTION CONTROL DISTRICT 2011 Int MC

Fig. A-18: A copy of the Imperial County Air Pollution Control District official record of the conditions as they existed for a determination of a "No Burn" day on July 24, 2016.

FIGURE A-19
IMPERIAL COUNTY AFFIDAVIT OF 30 DAY PUBLIC NOTICE


| | | | |
|---|---|---|---|
| <p align="center">AFFIDAVIT OF PUBLICATION (2015.5 C.C.P.)</p> <p align="center">STATE OF CALIFORNIA</p> <p align="center">County of Imperial</p> <p>I am a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk* of the printer of the</p> <p align="center">Imperial Valley Press</p> <p>a newspaper of general circulation, printed and published daily in the City of El Centro, County of Imperial and which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Imperial, State of California, under the date of October 9, 1951, Case Number 26775; that the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:</p> <p>06/28 .</p> <p>all in the year <u>2018</u></p> <p>I certify (or declare) under penalty of perjury that the foregoing is true and correct.</p> <p align="center"> SIGNATURE</p> <p>Name of Account: I C AIR POLLUTION CONTROL Order Number: 11191906 Ad Number: 31420262</p> <p>* Printer, Foreman of the Printer, or Principal Clerk of the Printer Date: 28 th day of June, 2018. at El Centro, California.</p> | <p>This space is for the County Clerk's Filling Stamp:</p> <p align="center">RECEIVED JUL 02 2018 AIR POLLUTION CONTROL DISTRICT</p> <p>Proof of Publication of:</p> <p align="center">NOTICE OF AVAILABILITY OF THE DEMONSTRATION OF THE OCCURRENCE OF FIVE EXCEPTIONAL EVENTS (EE)</p> <p>The Imperial County Air Pollution Control District (Air District) has prepared five Draft Exceptional Event (EE) Demonstrations, which support the requested exclusion of measured 24-hour concentrations at the Air District air monitoring sites. Listed below by date, site and concentration as measured by a Federal Reference Method monitor (FRM) or with a continuous Federal Equivalent Method monitor (FEM) are the five Draft EE's.</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>2015</p> <p>November 02 Westmorland FRM 179 ug/m3</p> <p>November 25 Niland FEM 193 ug/m3 Brawley FEM 215 ug/m3</p> <p>2016</p> <p>July 23 and July 24 Calexico FEM 195 ug/m3 El Centro FEM 203 ug/m3 Brawley FEM 155 ug/m3 Calexico FEM 194 ug/m3 El Centro FEM 162 ug/m3 Westmorland FEM 164 ug/m3</p> </td> <td style="width: 50%; vertical-align: top;"> <p>2016</p> <p>July 30 Brawley FEM 195 ug/m3 Calexico FEM 158 ug/m3 El Centro FEM 205 ug/m3 Niland FEM 206 ug/m3 Westmorland FEM 201 ug/m3</p> <p>August 09 Calexico FEM 155 ug/m3 El Centro FEM 159 ug/m3 Niland FEM 167 ug/m3 Westmorland FEM 166 ug/m3</p> </td> </tr> </table> <p>The public and all interested parties are encouraged to review and comment on the five Draft EE's listed above. These demonstrations provide the supporting evidence that on the days indicated for 2015 and 2016 Air District air monitors were affected by transported elevated levels of particulate matter of an aerodynamic size less than 10 microns (PM10). Winds, associated with a weather event suspended and transported PM10 into the region affecting areas within San Diego, Riverside, Yuma and Imperial counties. The five Draft EE's provide the scientific justification for the requested exclusions. The Air District is soliciting and accepting comments for 30 days commencing the date of the publication of this notice. The final closing date for submitting comments is July 30, 2018 by close of business.</p> <p>The five Draft EE's for days listed above are available for download at the Air District website at www.co.imperial.ca.us, under "Air Pollution". To view a hard copy of any of the eight Draft EE's, please visit the Air Pollution Control District office at 150 S. 9th Street, El Centro. Should you have any questions or concerns please feel free to call our office between 8am and 5pm at (442) 265-1800 and ask for Monica N. Soucier.</p> <p>L125 Jn28</p> | <p>2015</p> <p>November 02 Westmorland FRM 179 ug/m3</p> <p>November 25 Niland FEM 193 ug/m3 Brawley FEM 215 ug/m3</p> <p>2016</p> <p>July 23 and July 24 Calexico FEM 195 ug/m3 El Centro FEM 203 ug/m3 Brawley FEM 155 ug/m3 Calexico FEM 194 ug/m3 El Centro FEM 162 ug/m3 Westmorland FEM 164 ug/m3</p> | <p>2016</p> <p>July 30 Brawley FEM 195 ug/m3 Calexico FEM 158 ug/m3 El Centro FEM 205 ug/m3 Niland FEM 206 ug/m3 Westmorland FEM 201 ug/m3</p> <p>August 09 Calexico FEM 155 ug/m3 El Centro FEM 159 ug/m3 Niland FEM 167 ug/m3 Westmorland FEM 166 ug/m3</p> |
| <p>2015</p> <p>November 02 Westmorland FRM 179 ug/m3</p> <p>November 25 Niland FEM 193 ug/m3 Brawley FEM 215 ug/m3</p> <p>2016</p> <p>July 23 and July 24 Calexico FEM 195 ug/m3 El Centro FEM 203 ug/m3 Brawley FEM 155 ug/m3 Calexico FEM 194 ug/m3 El Centro FEM 162 ug/m3 Westmorland FEM 164 ug/m3</p> | <p>2016</p> <p>July 30 Brawley FEM 195 ug/m3 Calexico FEM 158 ug/m3 El Centro FEM 205 ug/m3 Niland FEM 206 ug/m3 Westmorland FEM 201 ug/m3</p> <p>August 09 Calexico FEM 155 ug/m3 El Centro FEM 159 ug/m3 Niland FEM 167 ug/m3 Westmorland FEM 166 ug/m3</p> | | |

Fig A-19: Is a copy of the Imperial County Air Pollution Control District official record (affidavit) affirming the publication of the notice of availability of the Exceptional Events Demonstration for July 23, 2016 and July 24, 2016. The date for closing comments was July 30, 2018

**FIGURE A-20
IMPERIAL COUNTY
COMMENTS REGARDING THE
JULY 23, 2016 AND JULY 24, 2016 EE DEMONSTRATION**

The ICAPCD did not receive any comments